



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

ber, and, with the pulse-rate full, there is ordinarily less blood in the brain.

Now, it is evident that the anæmia of sleep is not caused by constricted blood-vessels, else there would be the facial pallor seen during an attack of epilepsy, or paroxysm of anger or fright; and with this quieting of the brain-processes by stimuli withdrawal, such as is afforded by darkness, silence, and absence of irritation generally, a further lessening of molecular interchange in the brain occurs; and, I claim that it is the molecular activity in the brain that attracts the blood there chemically and mechanically, and the sympathetic, or vaso-motor system has evolved to facilitate this regulation of demand and supply. Then, granting this, there will be, during sleep, a passive condition of the blood-vessels, and the blood supply will fall to a minimum.

An extension of these considerations will enable all that pertains to sleep to be accounted for, such as aestivation, hibernation, insomnia, dreams, and all derangements of sleep. I hope soon to be able to treat this subject more fully.

S. V. CLEVENGER.

Chicago, Oct. 15.

#### Solid Glycerine.

IN response to the inquiry of Mr. C. C. Smith regarding the solidification of glycerine, I would say: A mixture of glycerine with water can be frozen at a sufficiently low temperature, and this temperature must be the lower proportionately as the percentage of glycerine is high. Thus, a ten per cent glycerine solution solidifies at  $-1^{\circ}\text{ C.}$ , a twenty per cent solution at  $-2.5^{\circ}\text{ C.}$ , a forty per cent solution at  $-17.5^{\circ}\text{ C.}$

Concentrated glycerine will not crystallize when cooled quickly, but at  $-40^{\circ}\text{ C.}$  will solidify to a gum-like mass. If a concentrated solution be allowed to stand for some time at  $0^{\circ}\text{ C.}$  crystals may form, but not always. The melting-point of these crystals, which are extremely hygroscopic, has been variously determined; and, indeed, their form of crystallization is much in dispute.

#### CALENDAR OF SOCIETIES.

##### Biological Society, Washington.

Nov. 5.—C. Hart Merriam, The Fauna and Flora of Roan Mountain, N.C.; C. V. Riley, Pea and Bean Weevils; Vernon Bailey, The Influence of the Cross Timbers on the Fauna of Texas; Theobald Smith, On Certain Minute (Parasitic?) Bodies Within the Red Blood Corpuscles.

##### New Mexico Society for the Advancement of Science, Las Cruces, New Mexico.

Nov. 3.—J. P. Owen, Notes on the Mound Builders; C. H. Tyler Townsend, A Partial Comparison of the Insect Fauna of the Grand Cañon with that of the San Francisco Mountain, in Arizona; Arthur Goss, The Exhaustion and Renewal of Soils; C. T. Hagerty, Mathematical Computation of the Comparative Strength of Insects and the Higher Animals.

#### Publications Received at Editor's Office.

BUBIER, E. T., 2nd. Questions and Answers About Electricity. New York, D. Van Nostrand Co. 16°. 100 p. Ill. 50 cts.

CHURCH, ALFRED J. Stories from the Greek Comedians. New York, Macmillan & Co. 12°. 350 p. Ill. \$1.

CROCKER, F. B. AND WHEELER, S. S. The Practical Management of Dynamo and Motors. New York, D. Van Nostrand Co. 12°. 100 p. Ill. \$1.

FERREE, BARR. Comparative Architecture. New York, The Author. 8°. Paper. 15 p.

GALTON, FRANCIS. Hereditary Genius. 2d ed. New York, Macmillan & Co. 8°. 411 p. \$2.50.

HORN, ARTHUR H. Metal Coloring and Bronzing. New York, Macmillan & Co. 16°. 352 p. \$1.

HUDSON, W. H. The Naturalist in La Plata. London, Chapman & Hall. 8°. 392 p. \$3.

SLOANE, T. O'CONNOR. The Standard Electrical Dictionary. New York, Norman W. Henley & Co. 12°. 624 p. \$3.

SPAR, MARY A. Leaves and Flowers. Boston, D. C. Heath & Co. 12°. 103 p. 30 cts.

UNIVERSITY OF PENNSYLVANIA. Contributions from the Botanical Laboratory. Phila., The University. 8°. Paper. 72 p. Ill.

#### SCIENCE.

Two cases are reported of glycerine having become solidified and crystallized during transport in the cold of winter. The first case occurred in January, 1867, the crystals formed being described as small octohedral, melting at  $7.2^{\circ}\text{ C.}$  In the second case, 1876, the crystals are described as belonging to the monoclinic system, and melting at  $15^{\circ}\text{ C.}$

According to Werner, commercial glycerine may be crystallized by bubbling chlorine-gas through it. A method discovered by Kraut in 1870, but to the best of my knowledge not yet made public, is used on a commercial scale in the works at Liesing, near Vienna. The concentrated glycerine is cooled to  $0^{\circ}\text{ C.}$ , and maintained at that temperature for some time, when crystals of glycerine previously produced are introduced. This causes a crystallization of the entire mass, leaving, however, much of the impurity in the mother liquor. The mass is then placed in a centrifugal, and the crystals freed. These are described as monoclinic, melting at  $20^{\circ}\text{ C.}$  to glycerine of  $30.5^{\circ}\text{ B.}$  According to Von Lang, the crystals are orthorhombic.

CHARLES PLATT, A.C.

The Vandenberg Laboratory, Buffalo, Nov. 8.

#### BOOK-REVIEWS.

*Crania Ethnica Americana. Sammlung Auserlesener Amerikanischer Schädeltypen.* Herausgegeben von RUDOLF VIRCHOW. Mit 26 Tafeln und 29 Text-Illustrationen. Large 4to. Berlin, A. Asher & Co., 1892. 36 marks.

SINCE the publication of Dr. Morton's "Crania Americana," now more than half a century ago, there has been no contribution to American craniology at all comparable to this work by the acknowledged master of that science in Germany. Future investigators will undoubtedly follow the lines and be guided by the principles here laid down or suggested. Let us briefly see what these are.

#### Exchanges.

[Free of charge to all, if of satisfactory character. Address N. D. C. Hodges, 874 Broadway, New York.]

For Sale or Exchange.—The undersigned has a lot of first-class duplicate bird's skins and sets of eggs, both rare and common, for sale or acceptable exchange. Also about two hundred second class skins and five hundred eggs, suitable for study specimens, at very low figures. The latter, for starting a collection, are as good as the best, embracing all classes and nearly all families. Also about forty species of fossils, principally Devonian. MORRIS GIBBS, M.D., Kalamazoo, Mich.

For Exchange—"The Birds of Kansas."—Goss, for Gray's Anatomy, or Medical Dictionary. Must be in good condition. Address, J. H. SIMPSON, Buchtel College, Akron, Ohio.

For Sale or Exchange.—The subscriber would like to receive cash offers, or an offer in exchange for the earlier volumes of Poggendorf's Annalen and the later volumes of Silliman's Journal, upon the following list: Chern.—Manuel de Conchyliologie. 2 vols. Nearly 5,000 figures, some hand-colored. Paper. Paris, 1859. Edwards.—Butterflies of N. A. 2 vols. Plates hand-colored. Vol. I., half calf. Vol. II. in parts. Leyman, Agassiz, Hagen.—Ills. Cat. Mus. Comp. Zool. at Harvard. No. I. Ophiuridae. No. II., Acalypheae. No. III., Astacidae. All bound in one volume. American Naturalist. Vols. I.-VII. Cloth. Silliman's Am. Jour. of Science and Arts. Third Series. Vols. I.-X. Cloth. Binney.—Terrestrial Mollusks of N. A. Colored plates. 4 vols. Stretch.—Zygaeidae and Bombycidae of N. A. Colored plates. Also a considerable library of monographs, reports, and scientific books, and a large number of duplicates of fossils, minerals and shells. E. A. STRONG, Ypsilanti, Mich., Sept., 1892.

Reading Matter Notices.  
Ripans Tabules: for torpid liver.  
Ripans Tabules banish pain.

#### Wants.

A POSITION is desired in the South, preferably in the Gulf States, where I can teach the sciences. Can also instruct in other branches. Salary only nominal, as I am simply desirous of employment while spending the winter in the South. A private family preferred, but will accept regular school-work if not too confining. MORRIS GIBBS, M.D., Kalamazoo, Mich.

WANTED.—By well-qualified, and experienced science master and associate of the Royal School of Mines, London, aged 26 (at present in England), a mastership in technical college or university for any of the following subjects: Engineering sciences, geology and mineralogy, physics, chemistry and metallurgy, etc., etc. Can provide excellent references and credentials. Apply, J. G., 17 Sussex St., Rochdale, England.

METALLURGICAL CHEMIST will give instruction in the metallurgy and chemical analysis of iron and steel. Complete or special courses applying to the manufacture of pig irons and steels, as well as to their uses. Address "METALLURGIST," care SCIENCE.

A GRADUATE of the University of Pennsylvania and a practical mineralogist of twenty years' experience desires to give his services and a cabinet of 25,000 specimens, all named, with about the same number of duplicates, in minerals, crystals, rocks, gems, fossils, shells, archaeological and ethnological specimens and woods to any institution desiring a fine outfit for study. The owner will increase the cabinet to 50,000 specimens in two years and will act as curator. Correspondence solicited from any scientific institution. J. W. HORTER, M.D., Ph.D., San Francisco, Cal., General P. O. Delivery.

CHEMIST AND ENGINEER, graduate German Polytechnic, Organic and Analytical, desires a position in laboratory or chemical works. Address 218½ E. 7th Street, New York, care Levy.

#### The American Geologist for 1892.

Edited by PROF. S. CALVIN, University of Iowa; DR. E. W. CLAYPOLE, Buchtel College; JOHN EYERMAN, Lafayette College; DR. PERSIFOR FRAZER, Penn Hort. Soc.; PROF. F. W. CRAGIN, Colorado College; PROF. ROBERT T. HILL, U. S. Irrigation Survey; DR. ANDREW C. LAWSON, University of California; R. D. SALISBURY, University of Wisconsin; JOSEPH B. TYRRELL, Geol. Sur. of Canada; E. O. ULRICH, Minnesota Geological Survey; PROF. I. C. WHITE, University of West Virginia; PROF. N. H. WINCHELL, University of Minnesota. Now in its IXth volume. \$3.50 per year. Sample copies, 20 cents. Address

THE GEOLOGICAL PUBLISHING CO., Minneapolis, Minn.

Dr. Virchow aims in the first place to establish a series of cranial ethnic types as the foundation of ethnic classification. Here, very much depends on the sense in which a "type" is understood. For him, it is the sum of those traits which belong to the crania of a given ethnic division, excluding, on the one hand, traits which are individual, and, on the other, those which are generic. Theoretically, it is the expression of the ethnic law of hereditary development, which, independently of outward circumstances, controls bodily growth. It must be defined by a series of exclusions and averages.

Each of the "types" which he figures is represented with the utmost fidelity in five different positions, showing the following norms: *norma frontalis*, *occipitalis*, *temporalis*, *verticalis*, and *basilaris*. All are represented from the points of view of the "German horizontal," which is a line drawn from the superior point of the external auditory foramen to the lower margin of the ocular cavity. This method of iconography is in itself worth a particular study, and no exception can be taken to its accuracy and its superiority to those heretofore in use.

Close attention is given to artificial deformations of the skull, which were numerous and widespread among the American aborigines. Eight leading varieties are classified and their effects analyzed. It is shown that by laws of compensatory growth such deformity does not entail diminished cubical capacity. The lowest capacity, 1,100 cubic centimeters, was in a normal skull from Chile; the highest, 1,830 cubic centimeters, was in a Labrador Eskimo.

The general conclusions reached by this masterful study will interest every one. In the first place, Dr. Virchow denies that there is any one characteristic aboriginal American type of skull, or, so far as one can see, that there ever has been one. The salient traits, none of which is peculiar to the race, are the *os Incæ*, which is an arrest of development; the absence of the temporal process, the presence of which is a pithecid trait; exostosis of

the meatus auditorius, which must be regarded as pathological; and certain changes in the alveolar and malar bones, largely due to function. Finally, the conclusion is reached that the lowest known forms of the human skull have no counterparts in any yet discovered in America, and therefore we must at present draw the inference that such types did not exist there, and that the oldest history of the human species will not be enlightened by any discoveries in the New World. Man came to America as an immigrant, physically highly developed, and doubtless in a condition of culture corresponding thereto.

This brief outline gives but a faint idea of the riches offered in Dr. Virchow's introduction, which is written, moreover, in that lucid and vigorous style of which he is such a master, and which is in such happy contrast to most German scientific composition. There are, however, a few points where the work is open to question. The reference on the first page to the inferior value of linguistic grouping carries with it its own condemnation; for where there is mixture of languages there is invariably mixture of blood, and hence of cranial types as well. Bones cannot guide us better than roots in such interminglings. In several of his "types" the history is sadly incomplete. Thus, Plate xv. shows a "Mexican" skull; but to say "Mexican" is every whit as vague as to say "European;" and what guarantee have we that its peculiarities are not individual instead of ethnic? This observation applies to several other of the crania figured. According to his own definition of type, such specimens can have but very doubtful value. In the text to Table xx. it is assumed that a prominent frontal protuberance is a proof that the skull belonged to a male. Do other anatomists concede this? But criticism is disarmed by the candid statement of the author that the material at hand was far from sufficient to reach the point he desired, and that his work must be regarded rather as a preliminary contribution to the study of this wide and important field. This it is, in the best sense of the word.

D. G. BRINTON.

# Dyspepsia

**Dr. T. H. Andrews**, Jefferson Medical College, Philadelphia, says of **Horsford's Acid Phosphate**.

"A wonderful remedy which gave me most gratifying results in the worst forms of dyspepsia."

It reaches various forms of Dyspepsia that no other medicine seems to touch, assisting the weakened stomach, and making the process of digestion natural and easy.

Descriptive pamphlet free on application to **Rumford Chemical Works, Providence, R. I.**

Beware of Substitutes and Imitations.

For sale by all Druggists.

## RACES AND PEOPLES.

By DANIEL G. BRINTON, M.D.

"The book is good, thoroughly good, and will long remain the best accessible elementary ethnography in our language."—*The Christian Union*.

"We strongly recommend Dr. Brinton's 'Races and Peoples' to both beginners and scholars. We are not aware of any other recent work on the science of which it treats in the English language."—*Asiatic Quarterly*.

"His book is an excellent one, and we can heartily recommend it as an introductory manual of ethnology."—*The Monist*.

"A useful and really interesting work, which deserves to be widely read and studied both in Europe and America."—*Brighton (Eng.) Herald*.

"This volume is most stimulating. It is written with great clearness, so that anybody can understand, and while in some ways, perforce, superficial, grasps very well the complete field of humanity."—*The New York Times*.

"Dr. Brinton invests his scientific illustrations and measurements with an indescribable charm of narration, so that 'Races and Peoples,' avowedly a record of discovered facts, is in reality a strong stimulant to the imagination."—*Philadelphia Public Ledger*.

"The work is indispensable to the student who requires an intelligent guide to a course of ethnographic reading."—*Philadelphia Times*.

Price, postpaid, \$1.75.

## THE AMERICAN RACE.

By DANIEL G. BRINTON, M.D.

"The book is one of unusual interest and value."—*Inter Ocean*.

"Dr. Daniel G. Brinton writes as the acknowledged authority of the subject."—*Philadelphia Press*.

"The work will be of genuine value to all who wish to know the substance of what has been found out about the indigenous Americans."—*Nature*.

"A masterly discussion, and an example of the successful education of the powers of observation."—*Philadelphia Ledger*.

Price, postpaid, \$2.

N. D. C. HODGES, 874 Broadway, N. Y.

## A TEMPORARY BINDER

for *Science* is now ready, and will be mailed postpaid on receipt of 75 cents.



This binder is strong, durable and elegant, has gilt side-title, and allows the opening of the pages perfectly flat. Any number can be taken out or replaced without disturbing the others, and the papers are not mutilated for subsequent permanent binding. Filed in this binder, *Science* is always convenient for reference.

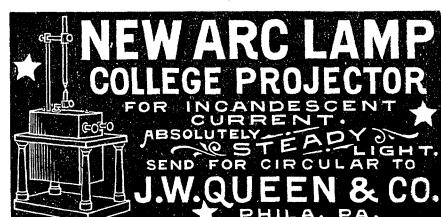
N. D. C. HODGES, Publisher,

874 Broadway, New York.

BACK NUMBERS and complete sets of leading Magazines. Rates low. AM. MAG. EXCHANGE, Schoharie N.Y.

## RESTORE YOUR EYESIGHT

Cataracts, scars or films can be absorbed and paralyzed nerves restored, **without the knife or risk**. Diseased eyes or lids can be cured by our **home treatment**. "We prove it." **Hundreds convinced**. Our illustrated pamphlet, "Home Treatment for Eyes," free. Don't miss it. Everybody wants it. "THE EYE," Glens Falls, N.Y.



## Houghton, Mifflin & Co.'s New Books.

### The Nature and Elements of Poetry.

By EDMUND CLARENCE STEDMAN, author of "Victorian Poets," "Poets of America," etc. With a Topical Analysis in the margin, and a full Analytical Index. Bound in a new and attractive style; also uniform with Mr. Stedman's other books. Crown 8vo, \$1.50.

Mr. Stedman has brought to this work his surest thought, and has given to it his utmost grace of style, so that in treatment and manner it is eminently worthy of its great theme.

### David Alden's Daughter, and Other Stories of Co- lonial Times.

By JANE G. AUSTIN, author of "Standish of Standish," "Betty Alden," "A Nameless Nobleman," "Dr. LeBaron and his Daughters," etc. 16mo, \$1.25.

A book of excellent stories, each representing some noteworthy character or incident or aspect of the Colonial times, which Mrs. Austin understands and describes so well.

### Land of the Lingering Snow.

Chronicles of a Stroller in New England from January to June. By FRANK BOLLES, Secretary of Harvard University. 16mo, \$1.25.

"It reveals a power of minute observation as remarkable as Thoreau's."—*Boston Herald*.

"He is a good observer and a good describer."—*New York Nation*.

### Cæsar.

A History of the Art of War among the Romans from the Era of Marius to the Fall of the Roman Empire, with a detailed account of the Campaigns of Caius Julius Cæsar. By THEODORE A. DODGE, Colonel U. S. Army. With a Portrait Bust of Cæsar, 250 Maps, Charts, and other illustrations. 1 vol. 8vo, gilt top, \$5.00.

This book is of the same high character as Colonel Dodge's "Alexander" and "Hannibal." It is based on thorough knowledge of the scenes of Cæsar's campaigns, and of all the authorities, ancient and modern.

### Dante's New Life.

(*Vita Nuova*.)

Translated by CHARLES ELIOT NORTON, Professor of Art in Harvard University. With Notes and Essays. Uniform with Mr. Norton's admirable Translation of the Divine Comedy. New Edition, revised. 12mo, gilt top, \$1.25.

Sold by booksellers. Sent, postpaid, by

HOUGHTON, MIFFLIN & CO., BOSTON,  
11 East 17th Street, New York.

## Arnold, Constable & Co. DRESS FABRICS.

*Ombre and Cameleon Velours, Silk and Wool Jacquards, Velours Ecossais, Fancy Reps and Bengalines.*

Novelties received by last steamers. New Fabrics, New Weaves, Novel Colorings in plain and Armure Cloths.

*Serges, Armures, Diagonals, Camel's Hair. Fancy and Clan Wool Plaids, Wool Crepes, Crepons, Cachemere d'Ecosse.*

### EMBROIDERED ROBES.

Broadway & 19th st.

NEW YORK.

## THE American Bell Telephone COMPANY.

95 MILK ST., BOSTON, MASS.

This Company owns the Letters Patent granted to Alexander Graham Bell, March 7th, 1876, No. 174,465, and January 30, 1877, No. 186,787.

The Transmission of Speech by all known forms of ELECTRIC SPEAKING TELEPHONES infringes the right secured to this Company by the above patents, and renders each individual user of telephones, not furnished by it or its licensees, responsible for such unlawful use, and all the consequences thereof and liable to suit therefor.

## ESTERBROOK'S STEEL PENS.

OF SUPERIOR AND STANDARD QUALITY.

Leading Nos.: 048, 14, 130, 135, 239, 333

For Sale by all Stationers.

THE ESTERBROOK STEEL PEN CO.

Works: Camden, N. J. 26 John St., New York.

New Method of Protecting Property from Lightning.

## The Lightning Dispeller.

Price, \$20 to \$30.—According to size.

The Patent Lightning Dispeller is a conductor specially designed to dissipate the energy of a lightning discharge,—to prevent its doing harm,—placing something in its path upon which its capacity for causing damage may be expended.

No recorded case of lightning stroke has yet been cited against the principle of the Dispeller. So far as known, the dissipation of a conductor has invariably protected under the conditions employed.

Correspondence solicited.

### AGENTS WANTED.

The American Lightning Protection Company,

United Bank Building, Sioux City, Iowa.

## THE LABRADOR COAST.

A JOURNAL OF TWO SUMMER CRUISES  
TO THAT REGION.

WITH NOTES ON ITS EARLY DISCOVERY, ON THE ESKIMO, ON ITS PHYSICAL GEOGRAPHY, GEOLOGY AND NATURAL HISTORY, TOGETHER WITH A BIBLIOGRAPHY OF WORKS, ARTICLES, AND CHARTS RELATING TO THE CIVIL AND NATURAL HISTORY OF THE LABRADOR PENINSULA.

By ALPHEUS SPRING PACKARD, M.D., Ph.D.

Sportsmen and ornithologists will be interested in the list of Labrador birds by Mr. L. W. Turner, which has been kindly revised and brought down to date by Dr. J. A. Allen. Dr. S. H. Scudder has contributed the list of butterflies, and Prof. John Macoun, of Ottawa, Canada, has prepared the list of Labrador plants.

Much pains has been taken to render the bibliography complete, and the author is indebted to Dr. Franz Boas and others for several titles and important suggestions; and it is hoped that this feature of the book will recommend it to collectors of *American* plants.

It is hoped that the volume will serve as a guide to the Labrador coast for the use of travellers, yachtsmen, sportsmen, artists, and naturalists, as well as those interested in geographical and historical studies.

513 pp., 8°, \$3.50.

N. D. C. HODGES, 874 Broadway, New York.

### POPULAR MANUAL OF VISIBLE SPEECH AND VOCAL PHYSIOLOGY.

For use in Colleges and Normal Schools. Price 50 cents Sent free by post by

N. D. C. HODGES, 874 Broadway, N. Y.

**MINERALS.** Cabinet Specimens, Collections, and material by the pound, for mineralogists, collectors, colleges, schools, and chemists. Send for 100-page catalogue, paper bound, 15 cents; cloth bound, 25 cents; supplement, 2 cents. GEO. L. ENGLISH & CO., Mineralogists, 733 & 735 B'way, N. Y.

Kindly mention "Science" in writing to Advertisers.